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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,212	03/30/2004	Iyad Qumei	15619US02	4068
23446 7590 11/23/2007 MCANDREWS HELD & MALLOY, LTD 500 WEST MADISON STREET SUITE 3400 CHICAGO, IL 60661			EXAMINER CHEN, SHIN HON	
			ART UNIT 2131	PAPER NUMBER
			MAIL DATE 11/23/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/813,212

Applicant(s)

QUMEI, IYAD

Examiner

Shin-Hon Chen

Art Unit

2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/12/07</u> .   | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. Claims 1-41 have been examined.

#### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1-9 and 12 are rejected under 35 U.S.C. 102(a) as being anticipated by Selkirk et al. U.S. Pub. No. 20030051160 (hereinafter Selkirk).

4. As per claim 1, Selkirk discloses an electronic device network for updating at least one of firmware and software in a plurality of electronic devices using at least one electronic device update, the network comprising: at least one update generator adapted to generate updates, the at least one update generator comprising an encrypting and decrypting engine (Selkirk: [0017]: server generated updates and transmits updates securely to firmware); at least one update store storing a plurality of electronic device updates (Selkirk: [0017]: update server); and at least one update delivery server adapted to dispense the plurality of electronic device updates (Selkirk: [0017]: server downloads update to firmware device); and wherein at least one of the firmware and software in the plurality of electronic devices and the at least one update being encrypted (Selkirk: [0009] and [0017]: the firmware updates are encrypted so that only firmware can decrypt the updates).

5. As per claim 2, Selkirk discloses the network of claim 1. Selkirk further discloses wherein the at least one update delivery server comprises secure socket layer support providing authentication and data encryption/decryption (Selkirk: [0017]: updates being provided through SSL).

6. As per claim 3, Selkirk discloses the network of claim 1. Selkirk further discloses wherein each of the plurality of electronic devices are adapted to retrieve secure encrypted updates from the at least one update delivery server to update the at least one of firmware and software resident in the plurality of electronic devices, and wherein at least a portion of the at least one of firmware and software resident in the electronic devices is encrypted (Selkirk: [0017]: encrypted update is provided to electronic device).

7. As per claim 4, Selkirk discloses the network of claim 1. Selkirk further discloses wherein each of the plurality of electronic devices comprises: one of encrypting and decrypting components; and a client for downloading updates (Selkirk: [0017]: the firmware device supports cryptographic functions).

8. As per claim 5, Selkirk discloses the network of claim 1. Selkirk further discloses wherein each of the plurality of electronic devices comprise a security services component providing secure communication with the at least one update delivery server (Selkirk: [0017]).

9. As per claim 6, Selkirk discloses the network of claim 1. Selkirk further discloses wherein each of the plurality of electronic devices comprise an encrypted section, the encrypted section comprising at least one of an encrypted data section and an encrypted code section (Selkirk: [0017]).

10. As per claim 7, Selkirk discloses the network of claim 1. Selkirk further discloses wherein each of the plurality of electronic devices comprise an encrypted section, the encrypted section comprising at least one of an encrypted data section and an encrypted code section (Selkirk: [0008]: firmware comprises data and code).

11. As per claim 8, Selkirk discloses the network of claim 7. Selkirk further discloses wherein the update agent is adapted to employ at least one of encrypting and decrypting components to update at least one of firmware and software resident in the electronic devices, and wherein at least a portion of the at least one of firmware and software is encrypted and stored in one of an encrypted data section and an encrypted code section (Selkirk: [0008]: firmware contains data and code; [0017]: encrypted firmware).

12. As per claim 9, Selkirk discloses the network of claim 1. Selkirk further discloses wherein the update generator is adapted to process an old memory image and a new image of the at least one of firmware and software in the electronic devices, and wherein at least a portion of the at least one of firmware and software is encrypted (Selkirk: [0017]).

13. As per claim 12, Selkirk discloses the network of claim 1. Selkirk further discloses wherein the electronic devices comprise a plurality of mobile electronic devices, and wherein the plurality of mobile electronic devices comprise at least one of a mobile cellular phone handset, personal digital assistant, pager, a multimedia player, and a camera (Selkirk: [0021]: pda).

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 10, 11 and 13-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Selkirk in view of Nachenberg U.S. Pat. No. 6230316 (hereinafter Nachenberg).

16. As per claim 10, Selkirk discloses the network of claim 1. Selkirk discloses firmware updates (Selkirk: [0017]). Selkirk does not explicitly disclose wherein the update generator is adapted to decipher one of encrypted data segments and encrypted code in both an old memory image and a new image to generate an update for updating at least one of firmware and software in the electronic devices. However, Nachenberg discloses generating an update file by performing binary difference between old file and new file (Nachenberg: column 5 lines 37-50). It would have been obvious to one having ordinary skill in the art to generate a firmware update by binary differencing the new and old image because binary difference is well known technique for update. Therefore, it would have been obvious to one having ordinary skill in the art at the

time of applicant's invention to combine the teachings of Nachenberg within the system of Selkirk because incremental update of a file provides efficient update process.

17. As per claim 11, Selkirk discloses the network of claim 1. Selkirk does not explicitly disclose wherein the update generator is adapted to employ deciphering techniques to extract one of ciphered code and enciphered data segments, process the one of enciphered code and enciphered data segments to generate an update comprising difference information, and cipher the one of code and data segments, and the difference information in at least one update. However, Nachenberg discloses generating an update file by performing binary difference between old file and new file (Nachenberg: column 5 lines 37-50). It would have been obvious to one having ordinary skill in the art to generate a firmware update by binary differencing the new and old image because binary difference is well known technique for update. Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to combine the teachings of Nachenberg within the system of Selkirk because incremental update of a file provides efficient update process.

18. As per claim 13, Selkirk discloses a method of encrypting update information within a firmware image in electronic device, the method comprising: creating encrypted updates for an electronic device (Selkirk: [0017]: encrypt update); and encrypting firmware images by applying at least one of stream symmetric enciphering and block symmetric enciphering (Selkirk: [0025] and [0030]: communication utilizing SSL in streaming network using block ciphers). Selkirk does not explicitly disclose the update file is binary differencing information. However,

Nachenberg discloses generating an update file by performing binary difference between old file and new file (Nachenberg: column 5 lines 37-50). It would have been obvious to one having ordinary skill in the art to generate a firmware update by binary differencing the new and old image because binary difference is well known technique for update. Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to combine the teachings of Nachenberg within the system of Selkirk because incremental update of a file provides efficient update process.

19. As per claim 14-19, Selkirk as modified discloses the method of claim 13. Selkirk as modified further discloses streaming block cipher technique used to update the firmware file as well obvious variation of partial encryption using block ciphers (Selkirk: [0025], [0030] and [0034]).

20. As per claim 20, Selkirk as modified discloses the method of claim 113. Selkirk as modified further discloses wherein an enciphering algorithm and an enciphering key are stored in the electronic device (Selkirk: [0017]: the firmware device can decrypt the encrypted transmission).

21. As per claim 21, Selkirk discloses the network of claim 13. Selkirk further discloses wherein the electronic devices comprise a plurality of mobile electronic devices, and wherein the plurality of mobile electronic devices comprise at least one of a mobile cellular phone handset, personal digital assistant, pager, a multimedia player, and a camera (Selkirk: [0021]: pda).



22. As per claims 22-41, claims 22-41 encompass the same scope and obvious variation of claims 1-21. Therefore, claims 22-41 are rejected based on the same reasons set forth above in rejecting claims 1-21.

***Response to Arguments***

23. Applicant's arguments filed on 9/12/07 have been fully considered but they are not persuasive.

Regarding applicant's remarks, applicant argues that the prior art of record does not disclose "at least a portion of the at least one of firmware and software in the plurality of electronic devices is encrypted". However, Selkirk discloses that the firmware updates are provided to the firmware through secure communication such as SSL, which is encrypted communication (Selkirk: [0017] lines 18-21: send encrypted data to the firmware device).

On the other hand, applicant argues that the prior art does not disclose "an update generator adapted to generate updates". However, the examiner disagrees. Selkirk discloses the server generates firmware updates and transmit the updates to the firmware through secure communication (Selkirk: [0017] lines 8-10: the server generates and provides the updates to firmware). Therefore, applicant's argument is traversed.

***Conclusion***

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wagner et al. U.S. Pat. No. 7095858 discloses system for securely upgrading firmware.

Kitani et al. U.S. Pub. No. 200400066703 discloses information processing apparatus for processing update for firmware.

25. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shin-Hon Chen whose telephone number is (571) 272-3789. The examiner can normally be reached on Monday through Friday 8:30am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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Examiner  
Art Unit 2131

SC

  
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